ISL DATA INTERFACE SOFTWARE
MAINS POWERED IR_LINK

PROCESSING THE DATA OBTAINED WITH YOUR HYDROSTEEL ANALYSER

USER MANUAL

Version 1.1, MAY 2002 © Ion Science Ltd

This manual provides installation and operation instructions for the ISL DATA INTERFACE SOFTWARE 'ISLPC'.

Read this manual before using the application.

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1 ABOUT THE ISL DATA INTERFACE SOFTWARE

The ISL DATA INTERFACE SOFTWARE is designed to provide an interface between a range of ISL Gas Detection instruments and computers running common data applications.

Using this software, user settings and upgrades can also be downloaded into the ISL instruments for customising purposes.

1.1 HARDWARE REQUIREMENTS

ISL DATA INTERFACE SOFTWARE runs on a user's PC under Windows® 95 (or later), or NT, for processing of saved data files.

Data downloading, interfacing and upgrading of an instrument requires the use of an IR_Link Box (supplied by ISL) connected to the RS232 communications port of a (user supplied) PC.

PC Settings

The IR_LINK Box works with serial communications to your PC, running at 19200 baud, 8-bit data, no parity and 1 stop bit.

1.2 INSTALLING THE ISL DATA INTERFACE SOFTWARE

Copy the complete ISL Directory on to drive **C:** of your PC.

2 OBTAINING DATA FROM HYDROSTEEL

Data transfer from Hydrosteel to a PC requires the use of the IR_Link Box and software.

2.1 ABOUT THE IR_LINK BOX

The IR_LINK Box enables serial communications to take place between the ISL instrument's IR port and a PC's RS232 port.

Note: *A set of miniature DIL switches is located under the IR_LINK Box. Never change these switch positions.*

2.2 CONNECTING THE IR_LINK BOX

1 Connect the serial cable (provided) between the back of the IR_LINK Box and the serial connection on your PC.

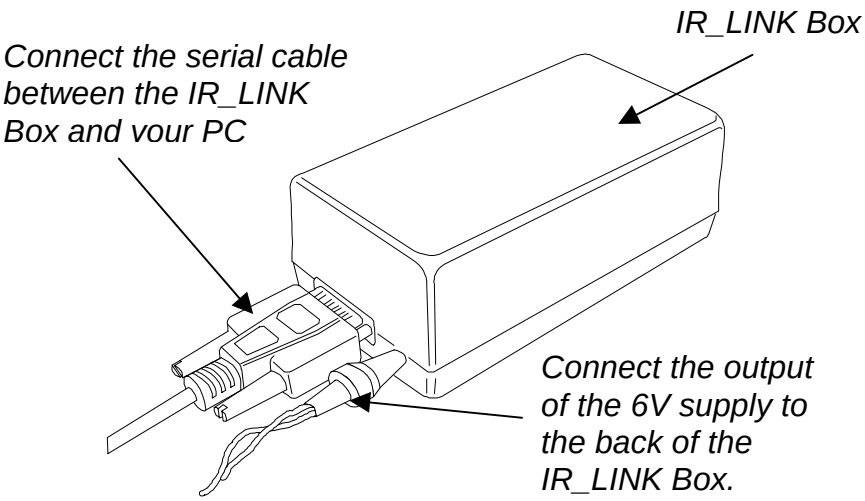
2 Connect the 6 V dc power supply plug (provided) to an ac supply.

3 Connect the output of the 6 V dc power supply to the back of the IR_LINK Box. A red LED blinks regularly (approximately once per second) when the IR_LINK Box has dc power applied to it.

2.3 DOWNLOADING DATA FROM HYDROSTEEL

1 Remove the Hydrosteel analyser leather jacket. Turn the analyser on. To enter normal operation either allow mode (90 s countdown) or press the on/off key twice to zero the instrument. Now press the Spanner, then the Data key. The instrument will display **PC connect.**

2 Locate the infrared port at the rear of the Hydrosteel and then


IR_LINK Box
Connect the serial cable between the IR_LINK Box and vour PC
Connect the output of the 6V supply to the back of the IR_LINK Box.

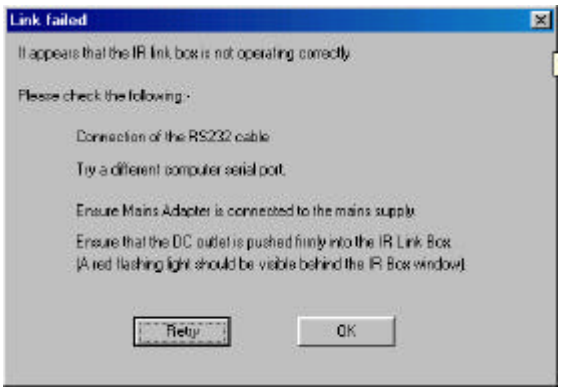
position this port at about 5cm (2”) away from the data-transfer window of the IR_LINK Box, *ensuring that the IR port is oriented downwards,* ie*, adjacent to the desk surface*.

3 Ensure that no other program on your PC is using the serial communications (IR) port.

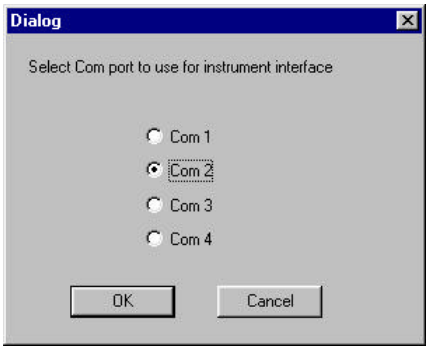
4 Within the ISL Directory on your PC, double click on the **islpc.exe** icon.

5 If the message window ‘Connected to Hydrosteel’ is displayed, Proceed to step **7**.

6 If the 'Link Failed' window is displayed, check the Hardware as instructed, using **Retry** as required.

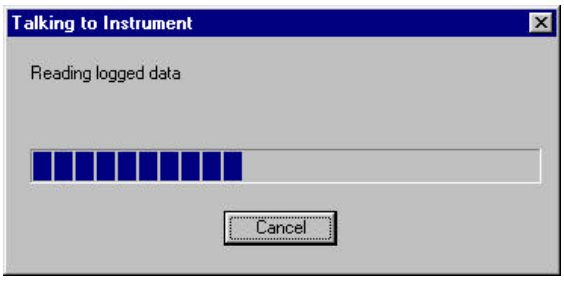

Link failed
It appears that the IR link box is not operating correctly
Please check the following :
Connection of the RS232 cable
Try a different computer serial port.
Ensure Mains Adapter is connected to the mains supply
Ensure that the DC outlet is pushed firmly into the IR Link Box
(A red flashing light should be visible behind the IR Box window)
Retry
OK

To change the prescribed serial port, click on **OK**, select **Hydrosteel**, and from the 'ISL Instrument Interface' window menu bar, select **Settings**, **Port**. Click on an alternative serial port (usually Com 1 or Com 2), click **ok**, and close the 'ISL instrument interface menu' panel. Return to step **4**.



If problems persist, please contact the supplier or Ion Science Technical staff.

7 The 'ISL Instrument Interface' window is now displayed. From the menu bar, click on **Data, download**. During data transfers, an additional LED in the IR_Link box will flash occasionally. The progress in data downloading is displayed. When the progress panel is full, allow a few 10's of seconds will be required for data analysis to be carried out.



The Interface program will display other messages if there are problems. If the communication with the analyser fails, the message window shown in step **6** will be displayed.

3 ACCESS TO THE MAIN INTERFACE FEATURES

Data files downloaded from an instrument are presented in three windows,

1/ *Data file index*, summary data is ordered sequentially according to zone, and then log file number. *Spot (60 s)* measurement log files include a 'computed flux', with an associated uncertainty, based on the response transient of the instrument and prevailing instrument drift (if any).

2/ *Data file graphical analysis:* flux transients corresponding to each data file are displayed. See also Section **4**.

3/ *Data file numerical data:* detailed data for each recorded data log.

The horizontal menu bar at the top of the 'ISL Data Interface' window provides access to the main features of the ISLPC Software. Depending on the displayed feature, abbreviated versions of these menus are available by right-clicking the mouse.

Before closing the programme, from the **Data** sub-menu, ensure you either **Save** data downloaded from the analyser, or **export** the data**,** for use in spreadsheets such as Microsoft Excel. More details on specific menu options is given below.

File

Print

Print highlighted (Numerical or Graphical) data file via your PC.

Print Preview

Allows you to view the currently chosen data file for next print.

Print Set-up

Allows the characteristics of the printer that is connected to your PC to be selected.

Recent File

Allows access to recently used files.

Exit

Exit the ISL Data Interface Software application.

Data

Download Data

Reads measurement data from the ISL instrument.

Save, Save As

Saves highlighted (Numerical and Graphical) data to PC file, in an encrypted format (*.phd). This is highly recommended to avoid

having to download the same data again later, or to avoid losing data later on.

There are 2 levels of protection used to stop changes to records: the first level is data encryption and the second level is the watermark inserted by the islpc program into the encrypted data.

Open

Allows access to stored measurement data files. Refer to Section 4. The islpc program searches for the file validity before opening data, and VALID will then be inserted into the header data of an open file.

Close

Closed highlighted (Numerical or Graphical) window. Note: Caution!

Export

Saves highlighted data as a comma separated variable file, *.csv file, for external analysis using standard spreadsheets, e.g. Excel. Please note *.csv files cannot be read by islpc.exe. The *.csv file contains a summary of all data files, followed by data presented in chronological order.

Instrument

Download Data

Downloads measurement data from the ISL instrument. Provides the same facility as the **Data** menu.

Erase All Data

Erases all data stored in the ISL instrument.

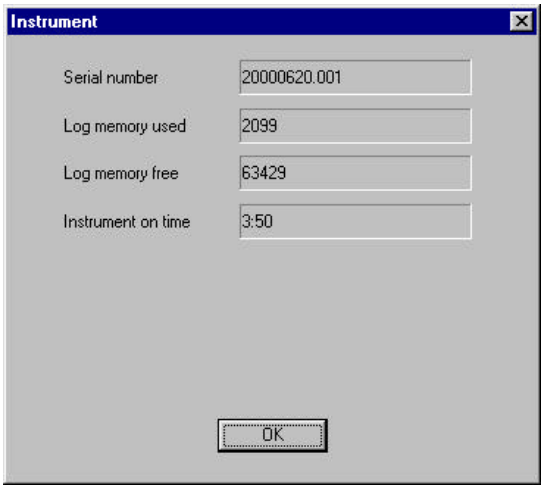
Caution: Ensure that any relevant data has been downloaded before using this option.

Clear Zone Headers

Clears the zone headers stored in the ISL instrument. As a consequence, all stored data is also erased - *caution: ensure that any relevant data has been downloaded before using this option.*

Instrument Details

Reads details of the ISL instrument currently interrogated using the IR_Link. **Serial Number**, **Log Memory Used, Log Memory Free** and the **Instrument On-time** are specified.



Show Reading

Enables a real-time display of the instrument measurement to be shown on your PC. Close this window to access any other.

Diagnostics

Allows instrument data to be downloaded prior to hardware fault finding. Click on **Read Flash**, following instructions as they appear.

Firmware Upgrade

Downloads an ION SCIENCE 'upgrade' file (*.upg) to the analyser. A complete upgrade consisting 4 files usually lasts about 4 minutes.

ISL Instrument Interface
Upgrade of instrument firmware will erase all logged data and zone information
Do you want to proceed?
Yes
No

Caution: Ensure that all relevant data has been downloaded and saved to PC before using this option.

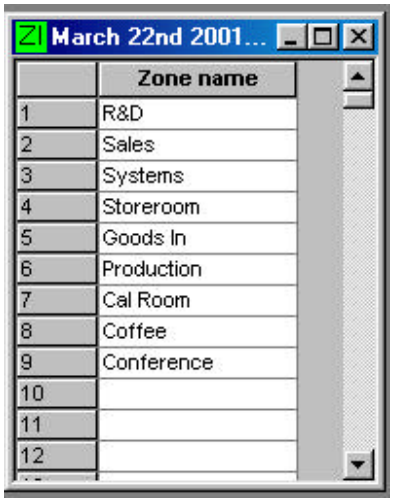
Zones

New

Allows you to create a set of zone headings. Enter up to 60 character into each of 199 zone addresses. These can then be downloaded to Hydrosteel. Having created the headings, you can also save them as type (*.zon) files on your PC for future use.

Open

Provides access to an existing set of zone headings, which can be upgraded and/or downloaded to the analyser.



View

Toolbar

Normal Windows® feature.

Status Bar

Normal Windows® feature.

Window

Window provides the normal Windows® features, but is only available when data is displayed.

Settings

Port

Enables the correct PC port to be selected for the RS232 connection to the ISL instrument. Only used if the port used has been altered or for first time installation of the IR_Link & ISLPC.

Help

Help Topics

Refer to this manual until the ISL Help software file is available.

About ISLPC

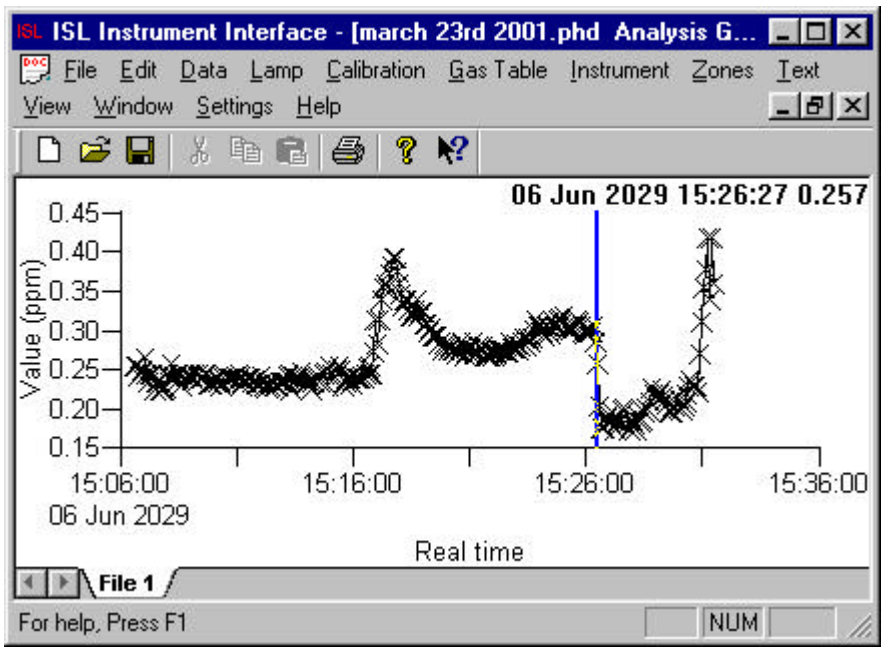
Version reference details for the ISL Data Interface Software.

4 GRAPHICAL ANALYSIS OF DATA

Setting the time and response scales

Right Click on the graphical analysis window to reveal the dropdown menu: Elapsed/Real time, No Markers, Cursor on/off, Log/Linear scale, Spread/Zero reference & Alarms on/off.

Choose Elapsed/Real time as required for time scale. Choose Spread/Zero reference and Log/Linear scale required for the



recorded response (shown ppm or mg/m3 as in data records).

Select Alarms on to set the display data scale as determined by the alarm level and type recorded with data for the application.

Using the cursor

Right Click on the graphical analysis window to reveal the dropdown menu: Elapsed/Real time, No Markers, Cursor on/off, Log/Linear scale, Spread/Zero reference & Alarms on/off.

Choose No Markers to remove all the crosses from the display.

Choose Cursor on and use mouse and a Left Click to position the cursor on the Graph. The data (x,y) will be shown top right.

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